

**METHOD FOR RECOVERING AND PRODUCING C<sub>4</sub>-C<sub>6</sub>  
DICARBOXYLATE FROM ALKALINE WASTE SOLUTION  
GENERATED IN CAPROLACTAM PREPARATION PROCESS**

**ABSTRACT**

The present invention relates to a method for recovering and producing C<sub>4</sub>-C<sub>6</sub> dicarboxylates from an alkaline waste solution generated in a caprolactam preparation process, in which the alkaline waste solution is treated with sulfuric acid to separate into an aqueous phase and an organic phase, allowing valuable substances contained in the organic phase to be firstly oxidized and converted into dicarboxylic acids. The dicarboxylic acids then undergo concentration, esterification and distillation processes, so as to obtain desirable C<sub>4</sub>-C<sub>6</sub> dicarboxylates with high purity. This therefore provides an efficient and improved method for effectively recovering most valuable substances from the alkaline waste solution, so that economic benefits in recovery are greatly raised.

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